

# PROGRESS OF MEDICAL SCIENCE.

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## THERAPEUTICS.

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UNDER THE CHARGE OF

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### ANARCOTINE.

DR. WILLIAM ROBERTS calls attention to this alkaloid of opium which he believes has been neglected. This drug which is generally known as narcotine, having been so named by its discoverer, Derosne, has been renamed by Palmer because it has been shown to be quite devoid of narcotic properties. Smyrna opium contains one-fourth as much of this alkaloid (2 per cent.) as it does of morphine (8 per cent.), while in Bengal opium, which is popularly used in India, it is present in larger quantity (morphine 4, against narcotine 6 per cent.). This drug came into notice in India about fifty years ago when quinine was very scarce and expensive. The important investigations of Palmer show incontestably that it is scarcely inferior—and in some classes of cases is superior—to quinine as an antiperiodic. From the observations of nearly one thousand cases he concludes that in 70 per cent. the fever was arrested at the second paroxysm after the medicine was administered; in 20 per cent. the arrest was equally sure, but not so quick; and in 10 per cent. it did not appear to have any curative effect. When there is an intolerance of quinine it was decidedly more efficacious. Garden, a few years later, believed that it was next in value, as an antiperiodic, to quinine. The doses range from one to three grains, and it is perfectly insoluble and tasteless. The chloride is very soluble and of an intensely bitter taste.—*British Medical Journal*, 1895, No. 1807, p. 405.

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### THE TREATMENT OF DIABETES.

M. ALBERT ROBIN notes that diabetics have a tendency to the loss of mineral substances by the urine. This loss should be avoided; for instance, by the use of sodium chloride in food, naturally salt foods, as olives. To replace potassium, green vegetables or cauliflower and chicory which are rich in that salt; or sixty to ninety grains of potassium tartrate can be given in wine at

meals, or *sel de seignette* [potassium and sodium tartrate] in a quart of water. To remedy the loss of phosphates, magnesium and calcium, the glycerophosphates of these metals may be employed, or the diet may be regulated. Bouillon is not only a tonic to the stomach but also a perfectly assimilable solution of the inorganic salts and represents the principal salines needed by the organism when undergoing a process of demineralization. The drug treatment comprises three groups: 1. Antipyrin. 2. Arsenic, codeine, alkaline earths, quinine sulphate. 3. Valerian, opium, belladonna, potassium bromide. Quinine, the alkalies, and cod-liver oil may be used with either of the three groups, but as adjuvant medication. Of the first group, antipyrin diminishes the general failure of assimilation, the coefficient of oxidation of albuminous material, sulphur and phosphorus, the effect upon the last two being evidence of its action upon the nervous system. It should be given in from thirty to forty-five grains per day, the latter being the maximum, together with one-half this quantity of sodium bicarbonate. This treatment should not be continued for more than five days because it is likely to give rise to albuminuria, an undesirable complication in diabetes. If the diabetic is already albuminuric this drug is almost contraindicated, although in some cases it may diminish the sugar without increasing the albumin. It should also be limited to the fat diabetics; its action is almost *nil* in pancreatic diabetes. Anorexia, rapid emaciation, and feebleness also constitute contraindications. As adjuvant treatment in this first stage are cod-liver oil in one or two teaspoonful doses *per diem*, preferably before the meal. If it is not well borne, butter can be substituted. During hot weather it should be omitted. The oil is indicated for those who become easily chilled and for the descendants of the tuberculous. The alkalies are used as above—to aid the use of antipyrin. In watching over the intestinal functions for constipation, five drachms of *sel de seignette* in a little tepid water, taken before breakfast, is the purgative of choice. Upon the fourth or fifth day the second stage of treatment is entered upon. Of the drugs used for this stage, quinine sulphate lessens the destruction of the albuminoids and of organs rich in sulphur and phosphorus, diminishes the excretion of carbon dioxide and the absorption of oxygen. Arsenic reduces general oxidation and aids nitrogenous and phosphorous metabolism. The alkalies and alkaline earths diminish the functional activity of the hepatic cells, the general activity of all the tissues, and retard the formation of urea and uric acid. Codeine shares in the properties of the opiates, diminishing the coefficients of the nitrogen-utilization, the glycosuria and the polyuria. These drugs are used as follows: Before luncheon a six-grain capsule of quinine sulphate, to be continued for six days, omitted four, and renewed for six days. Before breakfast and after dinner a capsule containing sodium arsenate, lithium carbonate, codeine, and extract of cinchona made up with *poudre théracale* [the well-known example of polypharmacy], the last merely to obtain its toleration by the stomach, and to administer a mild opiate [less than 1 per cent. of crude opium]. After this has been employed for five days the third stage is reached, and now then comes into use opium for its action upon nutrition, belladonna for the nervous system, valerian to relieve the polyuria, and potassium bromide which diminishes the elimination of the earthy phosphates. These drugs are used as follows: for eight days belladonna, valerian, cinchona, with

the extract *thébaïque*, are administered with lessened, later increased interval of dose. During this time, preferably at the meals, the patient should drink boiled water to which 8 *per mille* of sodium bicarbonate has been added. Cod-liver oil, which may have been continued during the second stage, is now omitted, but the wine of quinquina is continued during the meal. If opium and belladonna are not well borne, or in case of nervous women, potassium bromide in daily amounts of from thirty to forty-five grains in three doses, may be substituted. If the diabetes is florid, of alimentary origin, and the sugar abundant, the first stage of treatment, followed by a prolonged and a severe *régime* may be sufficient for cure. If the sugar does not disappear, but is only reduced, the diminution of sugar should be made greater, not by a continuation of the antipyrin, but by proceeding to the second stage for about fifteen days. If then the sugar, reduced by the antipyrin tends to increase toward the end of this stage, it is necessary to go to the third stage. If after this there is still sugar it is necessary to recommence the series; but whether it disappears or not, it is necessary to interrupt the drug treatment for a month. During this time the alkaline waters should be continued if the patient passes sufficient urea. If, however, this is diminished, or the complaint is made of feebleness, the alkalies should be abandoned and an iron preparation should be administered. If, after any stage of treatment, the sugar has disappeared, the patient should not consider himself cured, but he should resume, only with the greatest care, the use of starches, then fruits and sugar. Of three hundred cases treated, none of whom passed less than twenty-five drachms of sugar daily, twenty-four were completely cured. Probable cures were obtained in twenty-five cases—that is to say, when the sugar had been absent for several months, it would reappear under the influence of strong mental emotions or breaches of diet. But a short course of treatment usually sufficed to bring the glycosuria to an end. These cases which were markedly and permanently benefited were thirty-three in number, never departing from a certain diet and only returning occasionally for treatment. With seventeen others the sugar never disappeared completely, but there were present less than thirteen drachms, and they increased their body-weight.—*Bulletin Général de Thérapeutique*, 1895, 26 liv. p. 9; 28 liv. p. 49.

DOTT. V. ASCOLI ED A. ZERI report a single case treated by oxygen. A man of sixty presented the usual symptoms. The daily amount of urine was about three quarts of a specific gravity of 1026; albumin was absent; sugar was present in the proportion of twenty-five *per mille*, and the sediment contained abundant crystals of uric acid. The inhalation of oxygen was continued for three months, about forty-five gallons being used each day. After this time a diet rich in carbohydrates did not cause the appearance of sugar in the urine. The purpose of the oxygen was, as stated by the authors, to bring about the power of consuming the sugar in the organism so that it should not be excreted in the urine.—*Il Policlinico*, 1895, No. 11, p. 337.

#### THE TREATMENT OF ENTERIC FEVER ON THE ANTISEPTIC PRINCIPLE.

SURGEON R. H. QUILL reports that of thirty-six cases two died, a gratifying experience in India where the mortality is considerably higher than in temperate climates. The particular combination he uses is: Purest carbolic